

Some plants Have **SNEAKY PLANS**

I remember one beautiful summer day when our family decided to hike in a local wetland (marsh). As they scampered along, the children were very taken by yellow snapdragon-like flowers projecting above the water surface. Was this somebody's idea

of a joke? Who planted garden flowers underwater? This plant however is anything but humorous. Its purpose is to trap and digest small aquatic organisms like water fleas, mosquito wrigglers, tiny worms or anything that is the right size and moves.

Upon hearing about this plant, the children's attitude was "How weird is that?" Everybody knows that animals move and plants don't.

by
Moxie



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Dialogue



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THE DOG Everything you never knew about man's best friend!

As a perfect companion was created for man, namely woman, so too was a perfect companion created for both men and women. That companion was the dog. A study of dogs' design, temperament, variety, and personality shows they were created specifically to be companions, help-mates, and servants for humans. No other animal is even close that meets these many requirements.

That God made the perfect companion for both men and women, namely the dog, humans agree. In the United States, 77 million dogs live; 1.6 per household. From 2018 to 2020, the Canadian dog population grew from 7.6 million to 7.7 million. In the entire world, the number of dogs is close to a billion! Dogs are so loved that their passing evokes more emotional responses than

any other animal, often more than even the death of a close relative (Bova, 2022). The fact is "for many modern dogs, social bonding is vital to their individual well-being" as it is for ours (Morey, 1994, p. 346). Dogs were genetically programmed to have unconditional love for their human master. They will fiercely protect their master and at the same time also show great affection for him or her. Dogs are loyal, trainable and able to work very hard from sun up to sun down.



Dogs and humans have been close companions from earliest recorded history (Lange, 2002, p. 4). Examples of human remains of "stone age" people (claimed by evolutionists to be over 11,000 old) have been found buried with a dog. This is evidence that human and dog bonding go back to early history (Morey, 1994, p. 336). The idea of being buried with a dog was done so that the owner could take his companion into the afterlife. Cave paintings dating back to 3500 B.C. show a man walking his dog on a leash similar to what you would see anywhere today. (Bova, 2022, p. 25). Similar examples exist in most every civilization in history from Israel, Babylon, China, the Americans, and the African kingdoms.

Dogs Unique Ability to Communicate

Dogs lack a verbal vocabulary and thus they communicate using body language. These animals were designed to communicate with humans but not with human language, as that would cause confusion (imagine what they would say to you about dog food if they could talk!). In contrast to hu-

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by
Jerry
Bergman

Good Questions / Good Answers

In high school biology courses, it soon became apparent to Angie that among her fellow Christians, there was a diversity of opinions about origins. So, she consulted the HeadStart program about the impact of world views on the relationship between faith and science. She read information on the gap theory, the day age theory, the framework hypothesis, theistic evolution, neo-Darwinism, methodological naturalism, intelligent design and creation. Now she better appreciates why this whole website is devoted to creation.

Annabel wondered about “survival of the fittest” ideas. So, on HeadStart, she approached the topic under microevolution and macroevolution, which brought her to natural selection. This brought her to the famous examples of Darwin’s finches and peppered moths. She ended up reading about body plans, diversity, horizontal gene transfer, convergence and the tree of life. She is now better prepared to evaluate evolutionary arguments on these issues.

Heading into postsecondary studies, Troy wondered about how dramatically molecular biology has changed in the last few years. Consulting HeadStart, he first read about the human genome project which led him to ENCODE, genome

wide association studies, single nucleotide polymorphisms, coding DNA, non-coding DNA and “junk” DNA and most especially CRISPR. He was amazed at how these developments support intelligent design and creation.

Derek is heading to a museum to view the fossils there. He first clicks on fossil record in the HeadStart Program. The links take him to Cambrian explosion and Burgess Shale, sudden appearance and molecular clock. Naturally he also accesses sedimentary rock and radiometric dating.

Emily wonders about origin of life. Thus she accesses the Miller-Urey experiment, polymer formation, chirality, and RNA ribozyme. The topics sound difficult, but the discussion demystifies them. Her friend, on the other hand, reads up on irreducible complexity including molecular machines, invention, functionality and co-option.

Tim, for his part is just beginning to study biology. He just wants to know what the terms mean and what relevance they have for origins theories. He quickly accesses terms like homology because the definitions are non-technical and easily accessed from his smartphone. He is happy to have good information so readily available. www.create.ab.ca/headstart



headSTART

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“How to” Manual for Christian life

by
Margaret
Helder

Patricia Engler has written a most helpful and inspiring book to help post-secondary students, and in fact everybody, deal with a constant barrage of secular messages, especially in science. Her objective, and hopefully the objective of all of us, is to “know, defend and live out the truth of God’s Word.” Her book is aimed specifically at the post-secondary student, but it is suitable for every Christian. She also discovered, as a result of a six-month trip around the world to consult Christian students in many diverse countries, that while Christians in these cultures face a variety of challenges, the solutions are largely the same. So, what are these solutions? Patricia has penned this book to share those solutions with us.

The first step, naturally, is to discover what challenges one faces. For a start, all Christians who engage with their culture, are bound to encounter convincingly presented messages that challenge a biblical worldview. These include museums, zoos, aquariums, movies, books, nature shows, kids’ media, news stories, magazines, science centres and national parks.

Patricia then describes the intellectual atmosphere at a modern post-secondary institution. In such an atmosphere, where most people are supportive of unbiblical views, it would be easy to be overwhelmed. It is certainly tempting to compromise one’s faith with the pervasive intellectual atmosphere. However, it makes a huge difference whether one’s authority is God’s Word or man’s word. For example, if we accept the concept of millions of years of world history, then we need to accept man’s word over God’s Word in several major areas. Even if we don’t mean to, we are basically saying the Bible is wrong.

Much modern philosophy comes from a humanist spiritual agenda which takes its inspiration from evolutionary teaching. In addition, evolution is linked to other man-made teachings including Eastern mysticism. Even many Christian educational institutions actually promote evolutionary doctrines that contradict the gospel. This is true even on a global scale. To avoid compromise therefore, it would be best to begin your courses already armed with suitable defensive strategies. What every person needs is strong spiritual, intellectual and interpersonal foundations.

The author then shares with us the kinds of foundational tools one needs to face the world. Firstly, she discusses how one must work at and develop strong spiritual foundations including prayer and Bible study. Remember your confidence that God’s Word is true. Scripture stands up to scrutiny. Next, she discusses intellectual foundations.

In this context she declares that apologetics training is a ‘must have’ for any Christian in a secular classroom and culture. This includes training in spotting faulty logic, psychological manipulation and the confusion of facts with opinions. Lastly one needs lots of Christian support: friends, campus groups, church and maybe even mentors.

After all this, Patricia brings us into an actual classroom where messages that challenge a biblical worldview are bound to confront us every day. Based on her own personal experience, she shares with us how to deal with these situations, starting with “Don’t panic.” In this context she demonstrates how to catch many common fallacies. Among common persuasive techniques the world uses are the appeal of fitting in with one’s peers (conformity); the appeal of agreeing with the ‘experts’ (authority); the subtle pressure to believe an oft repeated statement (repetition); and the appeal of situations described in emotional terms (sym-



pathy).

It may seem like a daunting task to undertake this preparation that Patricia describes. Most people find any instructional manual daunting. But Patricia succeeded in her objectives and others have too. The critical issue is forming the intent to survive your education with faith intact. God gave you talents which you should certainly develop. Whether you want to be a doctor, nurse, engineer, or whatever, you need to undertake post-secondary training. With God’s help you too can use the benefits of your training to be the salt of the earth.

Patricia Engler. 2021. Prepare to Thrive: a survival guide for Christian students. Answers in Genesis. 295 pages.

CSAA recommends that as an excellent tool to provide understanding of scientific issues, one makes use of the online free resource HeadStart. It provides non-technical definitions and the significance for creation of major terms in biology and fossils and geology. www.create.ab.ca/head-start

by
Jerry
Bergman

“tail talk” is complex and even the wag direction is significant. Studies show that dogs wag their tails to the right when they are happy or confident, and to the left when they are frightened. The reason is the left side of the brain is associated with positive feelings like love and serenity, thus a happy dog wags his tail to the right because the left side of the brain controls the right side of the body. Conversely, the right half of the brain is associated with fear and depression, so a frightened dog wags his tail to the left (Miklosi, 2018).

Most dogs, even short haired ones, sport a thick coat of fur. Consequently, they require an effective way to cool their body. They have sweat glands only on the pads of their paws and the rest of the body is cooled by water evaporating from its tongue protruding from its open mouth (Miklosi, 2018). Even this tongue behavior effectively communicates much information including excitement.

Health Benefits of Dog Ownership

Positive long-term health benefits of dog ownership include lowering of blood pressure. One way they do this is by forcing their master to get more exercise. Petting dogs is another way which works by reducing cardiovascular, behavioral, and psychological indicators of anxiety and stress. Patients suffering from cancer and coronary artery disease especially benefit from the presence of a dog. Another reason is “A dog embodies unconditional love and ... Fido can wag, lick, and snuggle your child’s stress away” (Levine, 2022, p 34). In short, “a dog offers a child unconditional acceptance, companionship, and emotional attachment that he may not get from siblings or friends...[and] kids who have a close relationship with their dog are more

likely to have a strong bond with their parents and friends too.” (Levine, 2022, p 34)

Superior Sense of Smell

Dogs are endowed with much superior smell to help humans track lost children or criminals. A dog has a sense of smell at least 100 times, and depending on the breed, up to 10,000 to 100,000 times better than humans. The reason is they have forty times the scent processing cells and fifty times the olfactory area as humans do (Boron and Boulpaep, 2016, p. 356). They can smell an object 40 feet below ground, making them excellent to locate bodies buried in earthquake-damaged buildings. Normal humans can smell a spoonful of sugar in a cup of tea, but dogs can detect a spoonful of sugar dissolved in two Olympic-sized swimming pools (Boron and Boulpaep, 2016, p. 356).

Dogs can be trained to detect skin, breast, and bladder cancer by comparing samples from known cancer patients and people without cancer. Humans cannot have powerful senses in all areas or we would suffer from sensory overload, as any housewife with young children and a husband who has to



The Dog Everything you never knew about man’s best friend!

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emotions, the dog was given a tail to wag “which is one of the best methods of communication in the animal kingdom” (Llera and Buzhardt, 2022). When a dog is happy, he holds his tail in a neutral or slightly raised position and adds a healthy wag. The faster it wags, the more excited the dog. When the tail is lowered, the dog shows he is submissive and is not a threat. Canine



compete with the television and cell phones can testify.

Dogs serve humans in an amazingly large number of other roles: hunting, herding sheep, pulling sleds, wagons or other loads, protection, rodent control, assisting police and the military, leading the blind and serving as therapy dogs. Until snow mobiles, they were often the only means of transportation in the frozen far north.

Supposed Evolution

Like cats and horses, dogs exhibit an enormous amount of morphological variety. A total of 5,325 dog breeds are known. And most of these traits which differentiate them are controlled by only a few genes. For example, the dog coat variety is controlled by only three genes (Ratcliff, 2012, p. 43). The DNA makeup of wolves and dogs is almost identical and varies by only 11 fixed genes. Thousands of wolves are euthanized every year because they are incorrectly assumed to be dogs.

Assuming the oldest Darwin-date given by evolutionists is valid, the dog has not changed in 45 million years. Evolutionists speculate that dogs must have evolved from some ancient ani-

mal. The most commonly cited ancestor of dogs is *Hesperocyon*, a small fox-sized carnivore that evolutionists estimate lived some 42 to 29 million years ago (Wang and Tedford, 2008, pp. 26-27). Judging from the reconstruction of the *Hesperocyon*, it was just another dog along with others that became extinct. This does not help us to understand the evolution of dogs from non-dogs. Thus, the evolutionary ancestor of *Hesperocyon* is posited to be an archaic group of carnivorans in the family Miacidae (Wang and Tedford, 2008, pp. 8-10). Miacidae were extinct baby squirrel sized animals that had small cat like bodies with long tails. They were another extinct life form. Where the Miacidae evolved from is even more the product of speculation and dead-end reasoning.

How dogs became domesticated is also unknown and several conflicting theories exist. The most popular theory is that they scavenged food in human refuse dumps and eventually got used to humans, who took them in as pets. The problem with this theory is that since almost every civilization had dogs as pets dating back to the earliest civilizations, this scenario must have been repeated hundreds of times. The Biblical view is that man and dog have been companions from earliest history and continued to be so to today. Dogs were created to fulfill a companion role and have done so throughout all of history.

Summary

A dog is a unique one-of-a-kind animal that, in addition to the horse, has played a critical role in human history and still plays an important role in the life of modern humans. The fact is we love our dogs! Theories of its claimed evolution are very speculative and appear to be based on extinct kinds of dogs, of which many kinds exist. Ignoring these unsupported theories, let us therefore celebrate



and give thanks for the gift of canine companions and helpers.

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Some plants have SNEAKY PLANS

by
MOXIE

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How can aquatic creatures be so stupid as to let themselves be caught by a plant? The victims however aren't stupid, they are just outsmarted by the plant's design. Firstly, the plant which is suspended under the surface of the water, secretes compounds which attract victims. These plants feature innocent-looking little egg-shaped bladders connected to the plant stem. When a victim like a water flea brushes against a trigger

hair on a bladder, a cascade of events follows which ends in disaster for the intruder.

A trapdoor in the bladder wall swings up and inward. Water rushes in to fill a vacuum in the interior cavity. The inward tide carries the victim along. The trapdoor swings firmly shut behind the creature and its struggles stimulate the release of special enzymes which digest the victim. Once the products of animal digestion have been absorbed by the plant, the trap is re-set. Special glands absorb the water from the interior, restoring a vacuum, so that the trap is ready for another victim.

This ingenious plant is called bladderwort or *Utricularia*. Of the 200 or so species known worldwide, about 20 occur in North America and only 3 in Alberta. Bladderwort is one of the more

amazing designs in a group of plants that enhance their lifestyles by digesting animals. The provincial flower of Newfoundland (*Sarracenia purpurea*) is another carnivorous plant. This plant grows mainly in boggy areas of the northern boreal forest. The traps consist of a rosette of leaves which stand somewhat upright. The shape of the leaves is like narrow hollow cones, open at the top with a specially decorated hood at the top that stands vertically. The hood is covered in stiff downward pointing hairs which encourage an insect or small lizard to move downward toward the cavity which is filled with rainwater and digestive enzymes. The down-

ward pointing hairs mean that it is extremely difficult to crawl upward to escape the fatal brew below.

Carnivorous plants occur worldwide, especially in habitats which offer soil with low nutrients. Australia is famous for its variety of these plants since the soil there is so lacking in nitrates and phosphates. Nevertheless, the most famous carnivorous plant is the Venus flytrap (*Dionaea*), found only in a restricted area near the American Atlantic coast of North and South Carolina. This plant specializes in catching large walking or jumping insects and spiders.

The Venus flytrap plant is only a few inches tall and consists of 4-7 leaves arranged in a rosette. All the traps are modified leaves or parts of leaves. Each trap consists of hinged half leaves lying face side up. These halves are able to snap together like a mollusk bivalve shell. (Think clam.) The trap surface is armed with hairs sensitive to touch. To stimulate a response, however, there have to be two touches within 20 seconds (which means that a living creature and not a falling object is involved). Once stimulated, an electrical impulse triggers the hinged leaves to snap closed within 'nanoseconds'. The electrical signal is much like our own nervous impulses.

There follows a cascade of events that all mean doom for the trapped victim. Digestive enzymes are pumped into the cavity between the leaf halves and later other enzymes facilitate the moving of these new nutrients into the leaf. An article in *Smithsonian Magazine* March 9, 2022 declared: "Evolution has co-opted root genes and put them to work in the leaf. In roots, transporter genes are always active, but in the leaf only once nutrients are available."

The Smithsonian article claims that the carnivorous lifestyle in plants arose



independently at least twelve times through evolution, a “classic case of convergent evolution.” The term convergence means some different creatures converged on the same obscure choice for unknown reasons by unknown processes. This is an attempt to explain why some diverse organisms exhibit features in common which cannot be explained by their having developed from a common ancestor. This idea of convergence is an attempt to rescue evolution from its failure to explain an observation such as the situation we see with the carnivorous plants. [see Convergence in *HeadStart*]

The popular explanation about where carnivorous plants come from, however, mainly involves co-option, another attempt to rescue evolutionary explanations. “Co-option is an attempt to avoid the difficulties of explaining how natural selection could select for traits, the component parts of which must be fully assembled before they are functional.” [see Co-option in *HeadStart*] The Smithsonian article reports that recent findings point to co-option and repurposing existing genes. Although the evolutionary process is supposed to be blind, with no objective or purpose, nevertheless the article in *Smithsonian Magazine* declares: “Evolution is sneaky and flexible. It’s simpler in evolution to repurpose something than to make something new.” This sounds as if the evolutionary process has an objective! Another author, discussing evolutionary co-option, declared: “The only difference between human and evolutionary co-option is that we purposefully change an object’s function, while evolution simply takes advantage of an opportunity with no direction, purpose, or forethought.” [Deborah McLennan. 2008. *Evo Edu Outreach* quoted in *HeadStart*]. One wonders how



a process can be successful when it is so directionless.

Evolution may be blind, but scientists since the 1970s have discovered some eerie similarities among carnivorous plants. Most ordinary plants employ some enzymes to attack invading disease agents or animals that want to eat the plant. The enzymes that carnivorous plants use to digest their victims, seem similar to the defensive enzymes. The eerie observation however is that: “In many cases [carnivorous] plants that evolved entirely independently, used the same genes.” [*Smithsonian Magazine*] Even more surprising, the DNA sequences for the digestive enzymes in all these carnivorous plants, are almost the same. How does a blind process find the exact most suitable starter genes, not once but many times? And how does that

blind process just happen to modify these genes in the exact same way? Evolution fails as an explanation. Carnivorous plants are not the product of evolution, but of intelligent choice. These plants were designed to survive in nutrient-poor conditions and they do this with flair and panache. They are not only diverse, but beautiful and interesting.

Did we communicate all this to the children in the marsh on that summer day? Maybe we should run over that discussion with them again! Is anyone up for a hike? Acid bogs, for their part, offer a variety of other carnivorous species. Sundew and butterwort are common in Alberta. They catch insects by the simple expedient of sticky drops on their leaves, but they still have to digest their victims and absorb the nutrients. Let’s go!

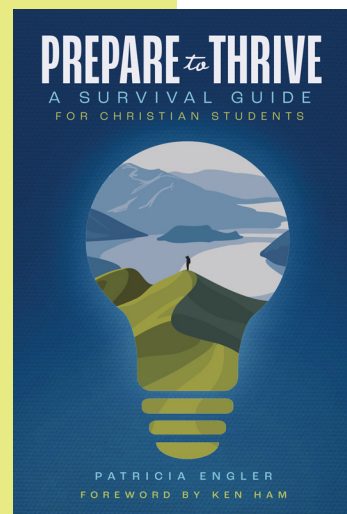


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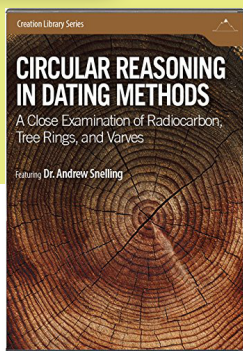
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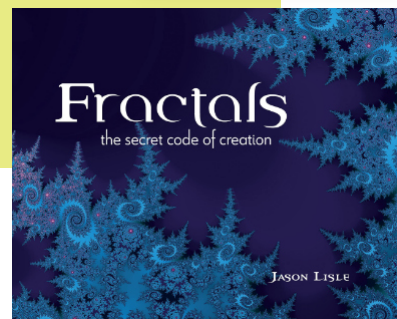
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